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- 2. März 2004

TBK - PATENT



Datum/Date

01-03-2004

Zeichen/Ref./Réf. EP 32054	Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°. 01121826.0-2205/1162595
Anmelder/Applicant/Demandeur/Patentinhaber/Propriétaire/Titulaire MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.	

SUMMONS TO ATTEND ORAL PROCEEDINGS PURSUANT TO RULE 71(1) EPC

You are hereby summoned to attend oral proceedings arranged in connection with the above-mentioned European patent application.

The matters to be discussed are set out in the communication accompanying this summons (EPO Form 2906).

The oral proceedings, which will not be public, will take place before the examining division

* on 05.10.04 at 13h 00 hrs, Bayerstr. 34 *
* PschorrHoefe, D-80335 München *

No changes to the date of the oral proceedings can be made, except on serious grounds (see OJ 10/2000, p. 456).

~~If you do not appear as summoned, the oral proceedings may continue without you (Rule 71(2) EPC).~~

Your attention is drawn to Rule 2 EPC, regarding the language of the oral proceedings, and to the Official Journal 9/91, p. 489, concerning the filing of authorisations for company employees and lawyers acting as representatives before the EPO.

The final date for making written submissions and/or amendments (Rule 71a EPC) is 03.09.2004

The actual room number as well as the waiting room numbers will be given to you by the porter in the foyer at the above EPO address.

Parking is available free of charge in the underground car park.

However, this applies only in the case of accessing the car park via the entrance "Zollstrasse".

For the examining division:
Tel. No. +49 89 2399-22.51

De Gaevel, Jean-Michel

Annexes:

Confirmation of receipt (Form 2936)
Communication (EPO Form 2906)

Registered letter with advice of delivery

EPO Form 2008.1PH 12.01

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Annex to the summons to oral proceedings

The examination is being carried out on the following application documents:

Text for the Contracting States:
DE FR GB

Description, pages:

1-58,58a as originally filed

Claims, No.:

2-8 as originally filed

1 as received on 02.10.2003 with letter of 02.10.2003

Drawings, sheets:

1/18-18/18 as originally filed

1. Since the applicant has requested in his letter dated 02 October 2003 that oral proceedings be held before any adverse decision is given, and since the examining division maintains its previously mentioned opinion also with respect to the newly filed set of claims, it is considered to be expedient to hold such oral proceedings at this stage of the procedure.

The applicant should note that it is intended to reach a final conclusion at the end of the oral proceedings, that is either to agree on the text to be proposed for grant or to refuse the application.

It is further noted that oral proceedings for the European application with the application number 00957107.6, to which this divisional application relates, and further divisional applications relating to that application with the application numbers 01121824.5, and 01121829.4 will take place before the same examining division and on the same date as the oral proceedings for this applications. The starting times for these four oral proceedings are set for formal reasons with two

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hour intervals. The examining division intends, however, for reasons of efficiency, to hold the oral proceedings time sequentially.

2. The following documents (D) are cited by the examiner (see the Guidelines, C-VI, 8.9). Copies of the documents are annexed to the communication and the numbering will be adhered to in the rest of the procedure:

D3: EP 0924683 A
D4: EP 0888004 A
D5: WO 9930308 A
D6: WO 9930309 A
D7: EP 0930603 A

3. The present claims 1 to 8 do not meet the requirements of Article 84 EPC as to clarity. The application is, therefore, not allowable.

- 3.1. The wording "temperature estimation means for estimating from said video signal an estimated temperature value corresponding to the temperature of said display screen" of claim 1/"estimating from said video signal a temperature estimated value corresponding to the temperature of said display screen" of claim 8 is unclear to the person skilled in the art, as it is not clear

- how the temperature estimated value is related to the temperature of the display screen,

- how a value corresponding to the temperature of the display screen can be estimated from the video signal alone.

I.e. the temperature of the display-screen should strongly depend on the ambient temperature so that even if the video signal is known, the temperature of the display screen might be unknown if the ambient temperature is not taken into account.

This renders claim 1/8 unclear.

- 3.2. The wording "operation means for finding a temperature difference value using a reference value corresponding to the temperature of said outer peripheral portion

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and said estimated temperature value" of claim 1/"finding a temperature difference estimated value using a reference value corresponding to the temperature of said outer peripheral portion and said temperature estimated value" of claim 8 is unclear to the person skilled in the art, as it is not clear

- how the temperature difference estimated value is derived from the reference value and the temperature estimated value,

- how a reference value is related to the temperature of said outer peripheral portion,

- how a reference value corresponding to the temperature of said outer peripheral portion can be derived.

I.e. the temperature of the outer peripheral portion should strongly depend on the ambient temperature, as acknowledged by the applicant in the passage from page 57, line 19 to page 58, line 6 of the description of the application as filed.

This renders claim 1/8 unclear.

3.3. The wordings "temperature estimation means" of claims 1, 2, 4, 8, "estimated temperature value" of claim 1, "temperature estimated value" of claims 2, 4, 8, "temperature of said display screen" of claims 1 and 8, "temperature difference value" of claim 1, "temperature difference estimated value" of claim 8, "temperature of said outer peripheral portion" of claims 1, 8, and "temperature of an outer periphery adjacent portion" of claim 2 is unclear to the person skilled in the art, as the meaning and scope of the term "temperature" is not clearly defined in this context.

This renders claims 1, 2, 4, 8 unclear.

3.4. The wordings "outer peripheral portion adjacent to said display screen" of claims 1 and 8, "outer peripheral adjacent portion in the display screen adjacent to said outer peripheral portion" of claim 2, "outer peripheral portion of said display" of claims 3, 6 7, "outer peripheries" of claim 3, "outermost periphery" of claim 3 are unclear to the person skilled in the art, as the terms "outer", "outermost", "peripheral", "peripheries", "adjacent" are relative terms without a well-recognised meaning in the particular art (see also Guidelines C-III 4.5).
I.e. each of the terms "outer peripheral portion of said display screen", "portion



adjacent to said display screen" could mean the complete surrounding area of the display screen, in which case the temperature of this area would be the ambient temperature. Or it could mean the area in the vicinity of the sealing glass joining the surface glass board and the reverse glass board, as described in the passage from page 28, line 19 to page 30, line 8 of the description of the application as published. Moreover, the outer peripheral adjacent portion in the display screen could mean the complete display screen, or only a square-frame portion comprising the two outermost rows and columns of display cells, which are adjacent to the area in the vicinity of the sealing glass as described in the passage from page 28, line 19 to page 30, line 8 of the description of the application as published.

This renders claims 1 to 3, 6 to 8 unclear.

- 3.5. The wording "temperature estimation means estimates the temperature estimated value corresponding to the temperature of an outer periphery adjacent portion in the display screen" of claim 2 is unclear to the person skilled in the art, as it is not clear
- how the temperature estimated value is related to the temperature of an outer periphery adjacent portion in the display screen, and
 - how temperature estimated value corresponding to the temperature of an outer periphery adjacent portion in the display screen can be derived.

This renders claim 2 unclear.

- 3.6. The wording "temperature estimation means estimates said temperature estimated value by integrating data relating to the luminance from said video signal and subtracting the amount of dissipated heat from the integrated data" of claim 4 is unclear to the person skilled in the art, as it is not clear
- what is the meaning of the term "the amount of dissipated heat",
 - how the amount of dissipated heat, which i.e. might have the unit "Joule", can be subtracted from the integrated data, which i.e. might be a digital number without a unit.

Moreover, the entities "the amount of dissipated heat", and "the integrated data" are not part of the claimed entity (see also Guidelines C-III 4.8a).



This renders claim 4 unclear.

- 3.7. The wordings "display screen displays the image on a gray scale corresponding to said video signal out of a plurality of gray scales" and "lowers the luminance of the image displayed on said display screen at the same ratio for each of the gray scales" of claim 5 are unclear to the person skilled in the art, as it is not clear - how the video signal of an image, which usually shows a plurality of gray scales, corresponds to a single gray scale.

This renders claim 5 unclear.

4. The applicant should note that depending on the outcome of the discussion of the objections concerning clarity raised in section 3. above, it might have to be discussed whether the application meets the requirements of Art. 83 EPC to disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

Specifically it might need to be discussed whether a clear understanding of the passages objected above would be necessary for the skilled person to be able to carry out the claimed invention, and whether the application documents would enable him to arrive at this clear understanding.

5. The applicant should note that depending on the outcome of the discussion of the objections concerning clarity raised in section 2. above and the outcome of the potential discussion whether the application meets the requirements of Art. 83 EPC, the documents D3 to D7 might have to be taken into account when considering the patentability of the subject-matter of the present set of claims.

6. Document D1 discloses in the Patent Abstracts of Japan, in the sections 0002 to 0008, 0058 to 0067, 0093 to 0103, and in the figures 1 to 3, 12 to 17, 27 a display device comprising:

a display device comprising a display screen for displaying an image having a plurality of discharge cells for displaying an image on a gray scale corresponding to a video signal inputted from the exterior by using a plurality of light emitting



formats which are the same in the total number of gray scales and differ in the number of light emitting pulses on each of the grey scales (plasma display panel for displaying inputted image data with plurality of luminescence discharge cells at crossing of the address electrodes with the X and Y electrodes, D1: Patent Abstracts of Japan; sections 0002, 0004 to 0008; figure 27, items X1, Y1 to YN, AM, 101; section 0059; figure 1, items 1, 2; sections 0093 to 0105; figure 12, items 2, 1A; control-section calculates the control factor, based on which the driving circuit adjusts the number of driving pulses controlling the brightness of the picture, by reading the temperature from the temperature storage section, D1: sections 0065; figure 1, items 1, 5 to 7; figure 3, item 7) and an outer peripheral portion adjacent to said display screen (ambience of the plasma display panel, D1: Patent Abstracts of Japan; sections 0058, 0060, 0063, 0096);

temperature estimation means for estimating from said video signal an estimated temperature value corresponding to the temperature of said display screen (temperature computing part of the device disclosed in D1 computes the temperature using the average value of the image data computed by the average value computing part and the ambient temperature of the plasma display panel detected by an ambient temperature detector and stores it in the temperature storage section, D1: Patent Abstracts of Japan; sections 0060 to 0064, 0096; figure 1, items 4 to 6, 8; figure 3, items 4 to 6, 8 to 11; figure 12, items 4 to 6, 8);

operation means for finding a temperature difference value using a reference value corresponding to the temperature of said outer peripheral portion and said temperature estimated value (temperature computing part of the device disclosed in D1 computes the temperature using the average value of the image data computed by the average value computing part and the ambient temperature of the plasma display panel detected by an ambient temperature detector and stores it in the temperature storage section, D1: Patent Abstracts of Japan; sections 0060 to 0064, 0096; figure 1, items 4 to 6, 8; figure 3, items 4 to 6, 8 to 11; figure 12, items 4 to 6, 8); and

control means for selecting the light emitting format depending on said temperature difference estimated value out of said plurality of light emitting formats and controlling the luminance of the image displayed on said display



screen on the basis of said temperature difference value (control section calculates the control factor, based on which the driving circuit adjusts the number of driving pulses controlling the brightness of the picture, by reading the temperature from the temperature storage section, D1: sections 0065, 0097 to 103; figure 1, items 1, 5 to 7; figure 3, item 7; figure 12, item 7E; figure 16, items 7E, 16E, 17 to 28).

Therefore the device according to D1 contains all the technical features of the present independent claim 1, so that the subject-matter of this claim is not new. The application is thus not allowable according to Articles 52 (1) and 54 EPC.

Furthermore, it is noted that the subject-matter of present independent claim 1 is also fully anticipated by document D2, which discloses a display device comprising:

a display device comprising a display screen for displaying an image having a plurality of discharge cells for displaying an image on a gray scale corresponding to a video signal inputted from the exterior by using a plurality of light emitting formats which are the same in the total number of gray scales and differ in the number of light emitting pulses on each of the grey scales (image display device displaying an image based upon an input video signal on the PDP; D2: Patent Abstracts of Japan; sections 0013 to 0032; figure 1, items 1 to 5; fuzzy control part computes control data for optimizing display characteristics as display pulse numbers, gamma value, D2: Patent Abstracts of Japan; sections 0058 to 0068; figure 1, items 3, 2a, 2d, 5) and an outer peripheral portion adjacent to said display screen (periphery of the plasma display panel, D2: Patent Abstracts of Japan; Patent Abstracts of Japan; sections 0013 to 0032);

temperature estimation means for estimating from said video signal an estimated temperature value corresponding to the temperature of said display screen (spatial distribution part detects brightness of the display image, spatial distributions of luminance and hue, D2: Patent Abstracts of Japan; sections 0013 to 0032; figure 1, item 2a);

operation means for finding a temperature difference value using a reference

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value corresponding to the temperature of said outer peripheral portion and said temperature estimated value (fuzzy control part calculates control data from the brightness of the display data and the temperature of the display detected by the temperature detecting elements, D2: Patent Abstracts of Japan; sections 0013 to 0032; figure 1, items 3, 2a, 2d); and

control means for selecting the light-emitting format depending on said temperature difference estimated value out of said plurality of light emitting formats and controlling the luminance of the image displayed on said display screen on the basis of said temperature difference value (fuzzy control part computes control data for optimizing display characteristics as display pulse numbers, gamma value, D2: Patent Abstracts of Japan; sections 0058 to 0068; figure 1, items 3, 2a, 2d, 5).

7. The method according to D1 contains, as shown in section 3.2. of the of the communication dated 14 April 2003, all the technical features of the present independent claim 8, so that the subject-matter of this claim is not new. The application is thus not allowable according to Articles 52 (1) and 54 EPC.

Furthermore, it is noted that, as shown in section 3.2. of the of the communication dated 14 April 2003, the subject-matter of present independent claim 8 is also fully anticipated by document D2.

8. The applicant has argued in the last paragraph on page 3 of his letter dated 02 October 2003 that the wording "temperature estimation means for estimating from said video signal an estimated temperature value corresponding to the temperature of said display screen" of claim 1/"estimating from said video signal a temperature estimated value corresponding to the temperature of said display screen" of claim 8 was clear, as the temperature of the display screen was directly related to the generated heat in the display screen, which was directly related to the luminance of the discharge cells and thus the video signal. The applicant's arguments have not been found convincing, since, as explained in section 3. above and in section 2. of the communication dated 14 April 2003, the



temperature of the display screen - according to basic laws of thermodynamics - depends not on the heat dissipated in the cells alone, but on various factors, e.g. the ambient temperature, or thermal conduction.

The applicant has argued in the second paragraph on page 4 of his letter dated 02 October 2003 that the wording "operation means for finding a temperature

difference value using a reference value corresponding to the temperature of said outer peripheral portion and said estimated temperature value" of claim 1/"finding a temperature difference estimated value using a reference value corresponding to the temperature of said outer peripheral portion and said temperature estimated value" of claim 8 was clear to the skilled reader, as

- this wording meant that the value is derived from that temperature and in which that temperature is still recognisable, and

- the term "difference value" implied that the difference value was formed by a subtraction utilising the reference value and the temperature difference value.

The applicant's arguments have not been found convincing, since, as explained in section 3. above and in section 2. of the communication dated 14 April 2003,

- the term "corresponding" does not clearly define the relation between the reference value and the temperature of the outer peripheral portion (E.g. the reference value could correspond to the temperature of the outer peripheral portion by being in "high" status in case there is information about the temperature of the outer peripheral portion available, or being in "low" status in case there is no

information about the temperature of the outer peripheral portion available, by being a fixed reference value as disclosed for the first embodiment in the passage from page 22, line 12 to line 17, or by being a value set in dependance of the measured temperature.),

- the term "difference value" does not clearly define that the difference value is formed by a subtraction utilising the reference value and the temperature difference value (E.g. it might not even be feasible to perform such a subtraction, as it is not clearly defined that the reference value is in a format which can be subtracted from the estimated temperature value.).

The applicant has argued in the first paragraph on page 5 of his letter dated 02 October 2003 that the wordings "outer peripheral portion" of claim 1/3/6/7/8, "outer peripheral adjacent portion" of claim 2, "outer peripheries" of claim 3, "outermost



periphery" of claim 3 were clear to the person skilled in the art, as the term "periphery" designates a border so that the peripheral portion designates a portion outside the border..

The applicant's arguments have not been found convincing, since, as explained in section 3. above and in section 2. of the communication dated 14 April 2003, as the terms "outer", "outermost", "peripheral", "peripheries", "adjacent" are relative terms without a well-recognised meaning in the particular art (see also Guidelines C-III 4.5).

I.e. each of the terms "outer peripheral portion of said display screen", "portion adjacent to said display screen" could mean the complete surrounding area of the display screen, in which case the temperature of this area would be the ambient temperature. Or it could mean the area in the vicinity of the sealing glass joining the surface glass board and the reverse glass board, as described in the passage from page 28, line 19 to page 30, line 8 of the description of the application as published. Moreover, the outer peripheral adjacent portion in the display screen could mean the complete display screen, or only a square frame portion comprising the two outermost rows and columns of display cells, which are adjacent to the area in the vicinity of the sealing glass as described in the passage from page 28, line 19 to page 30, line 8 of the description of the application as published.

The applicant has argued in the passage from the second paragraph on page 2 to the first paragraph on page 3 of his letter dated 02 October 2003 that the device disclosed in the document D1 determined the temperature difference only between different fields of a panel periphery, but not between the periphery of the panel and an adjacent portion outside the panel, and, while the ambient temperature was taken into account as starting point for the determination of the respective field temperatures, the controlling was based only on the respective field temperatures.

The applicant's arguments have not been found convincing, since, as explained in section 5. above and in section 3. of the communication dated 14 April 2003, document D1 discloses i.e. in the Patent Abstracts of Japan and the sections 0058 to 0068 as well as corresponding figure 1 that the temperature computing part of the device disclosed in D1 computes the temperature using the average value of the image data computed by the average value computing part and the



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ambient temperature of the plasma display panel detected by an ambient temperature detector and stores it in the temperature storage section (D1: Patent Abstracts of Japan; sections 0060 to 0064; figure 1, items 4 to 6, 8; figure 3, items 4 to 6, 8 to 11), that the control section calculates the control factor, based on which the driving circuit adjusts the number of driving pulses controlling the brightness of the picture, by reading the temperature from the temperature storage section (D1: section 0065; figure 1; items 1, 5 to 7; figure 3, item 7).